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National Environmental/Energy Workforce Assessment Air Programs

National Field Research Center, Inc, Iowa City, IA

Prepared for

Environmental Protection Agency, Washington, DC Office of Research and Development

Aug 79

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August 1979
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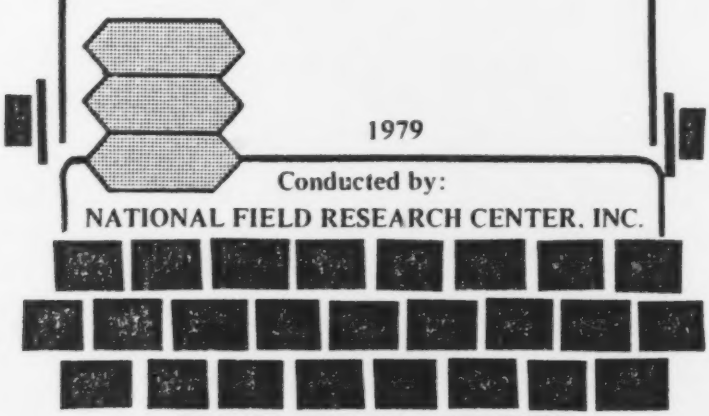
NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT PHASE III

JAIR PROGRAMS



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16. ABSTRACT

This directory, one of 18 volumes in Phase III of the National Environmental/Energy Workforce Assessment, provides information on post-secondary environmental education programs in the United States. Structured around information requests mailed to post-secondary education institutions, the directory provides the name and address of each institution listed, a contact person at each institution, the academic program title, and the degree offered at the institution (2-year, 4-year, etc.).

Phase III includes twelve such directories of post-secondary programs: One each for air, noise, pesticides & toxicology, potable water, wastewater, radiation, solid waste, and energy; one for combined water/wastewater programs; and a composite volume on each of the three areas of environmental engineering/technology, environmental science/health, and environmental studies. In addition, Phase III includes the following six volumes: Environmental Employment in Public Service Jobs Programs -- An Analysis of CETA Title VI FY 78 Projects; Salaries & Attendant Problems of Public Sector Environmental Employment; The Role of CETA in Direct Training and Employment; Private Sector Training Activities; Problems in Environmental Education & Training; and the Workforce Planning Bibliography.

Phase I of the Assessment evaluated workforce needs for pollution control and abatement in the U.S. during 1976-81. Phase II gathered data on training and educational programs in the post-secondary environmental education field as of 1978.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
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Conducted by:

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INTRODUCTORY NOTE

The National Environmental/Energy Workforce Assessment, Phase III, was conducted by National Field Research Center, Inc., with main offices in Iowa City, Iowa. The following personnel have had primary responsibility for the development of the project reports.

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ACKNOWLEDGEMENT

The volumes of post-secondary environmental and energy programs were developed under the auspices and guidance of the U.S. Environmental Protection Agency, by the National Field Research Center, Inc. as part of the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT, PHASE III. Sincere appreciation is extended to the many individuals and institutions who assisted in the identification and description of the programs, thus generously contributing to the success of this national project. Of particular importance are those individuals identified as contact persons in the program entries.

A special word of appreciation is extended to Mr. J. Donald Cook, Chief, Workforce Coordination Team, U.S. Environmental Protection Agency, Washington, D.C., and to the Manpower Officers and Workforce Coordinators from each of the U.S. Environmental Protection Agency Regional Offices.

PREFACE

This volume includes all identified post-secondary education and/or training programs which have been selected as pertinent to one media-specific area (i.e., air, wastewater, etc.). For ease of handling, the programs are presented in alphabetical order according to the name of the institution. The Appendix, however, presents a listing of the institutions by state, with reference to page numbers.

This portion of the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT, Phase III, was conducted for the U.S. Environmental Protection Agency, by the National Field Research Center, Inc. with offices located in Iowa City, Iowa; Atlanta, Georgia; Denver, Colorado; and Washington, D.C.

FOREWORD

Information for this portion of the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT, Phase III, was compiled through extensive review of catalogues from post-secondary education institutions listed in Post-Secondary Education, Education Directory, Colleges & Universities, 1976-77. All program entries were sent to the institutions for review and correction. In most cases, the program entries were returned after being reviewed. Those entries which were not returned have been indicated by an asterisk in front of the program title.

This twelve-volume report contains program entries from junior colleges, vocational/technical training institutes, community colleges, four-year colleges, and universities, as well as other training institutions. Programs are representative of all levels, from academic certification through doctoral degrees. The environmental pollution control areas of air, noise, pesticides, potable water, radiation, solid waste, wastewater and energy were surveyed. In addition, some programs which were not readily categorized

into media-specific areas (i.e., radiation, air, etc.) or which represented multiple media areas in curricula content, have been presented under the title of composite.

Readers are advised that material from the Acknowledgement through the Project Methodology is identical in all twelve program volumes. The reason for such duplication rests with the division of volumes into media specific areas, which increases probability that individuals will only read a given volume of special interest.

Readers are further advised that the purpose of these volumes is to point the direction for further information. Courses, programs and individuals are all subject to change over a given period of time. The inclusion of a specific program does not assure that the program is conducted every year nor does it assure that graduates meet specialized occupational requirements. Readers with specific questions should correspond directly with contact persons.

PROJECT BACKGROUND

The NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT, conducted by the National Field Research Center under the direction of the U.S. Environmental Protection Agency, is an effort to meet the national concern for the preservation and conservation of our country's resources. The project was developed as a multi-phase direct inquiry into the availability and readiness of our environmental workforce.

In keeping with the objective of the assessment, this national effort was directed at environmental/energy workforce requirements, national environmental education preparedness, and the functional relationship between the two.

Phase I of the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT focused upon the development of "workforce demand projections" through 1982 for all public environmental agencies. This on-site assessment, which was carried out in all 50 states, Puerto Rico and the Virgin Islands, culminated in a numerical profile of the growth patterns and workforce needs at national and state levels. Stratification of the overall definition of "environmental occupation" into seven

distinct vocational areas enhanced even further the applicability of the results. In addition to this public sector workforce assessment, Phase I included an overview analysis of private sector needs and a brief review of selected environmental educational programs.

Phase II of the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT was structured around an intensive on-site inventory of representative environmental educational offerings on a national scale. The primary objective of this portion of the project was to collect and aggregate data on training and educational programs in both the post-secondary education field and in the private sector and to do so by environmental area. Specifically, the study was designed to provide an overview of environmentally related post-secondary education programs, their program structures, representative course offerings, employment history of the graduates, and the faculty structures. Additionally, information was collected on program requirements and program projections regarding faculty and students.

Phase III of the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT was completed in mid-1979. In an effort to draw together the relationship between Phase I and Phase II

of the project, several major areas were selected and monographs developed. In an effort to assist Federal and State planners, an environmental/energy manpower bibliography was developed and annotated. A final portion of the Phase III involved the identification of all environmental/energy post-secondary education programs as compared to the Phase I and Phase II which presented representative programs. This compendium of post-secondary environmental/energy programs was presented in media-specific volumes (i.e., Air, Potable Water, Solid Waste, etc.). While more extensive research may be advisable, it is anticipated that the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT in its entirety represents the most comprehensive research effort to date regarding environmental/energy workforce requirements and the educational community's ability to meet these needs.

PROJECT METHODOLOGY

The NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT, Phase III, includes several components, one of which is made up of the directories of post-secondary environmental/ energy programs. Utilizing the Post-Secondary Education, Education Directory, Colleges and Universities, 1976-77, requests were made of the 3,075 institutions and in addition any new institutions which could be identified. All environmental programs were categorized according to media areas, i.e., air, water, radiation, etc. The program entry information was sent to the contact person for corrections, deletions and general review. The contact persons were requested to return the reviewed information to project personnel. In the majority of cases, the information was returned by the institutions. Those program entries which were not returned have been indicated with an asterisk in front of the program title.

In total, 1,359 programs are presented in these volumes. All 50 states, the District of Columbia, Puerto Rico and the Virgin Islands are represented in the program entries. The introductions of each

volume present the details of selection criteria, geographic location, etc., of the programs presented in that specific environmental area.

The directories have been prepared by media specific area. The volumes which make up this portion of the project are:

* AIR
* NOISE
* PESTICIDES & TOXICOLOGY
* POTABLE WATER
* WASTEWATER
* WATER/WASTEWATER
* RADIATION
* SOLID WASTE
* ENERGY
* COMPOSITE: Environmental Engineering/Technology
* COMPOSITE: Environmental Science/Health
* COMPOSITE: Environmental Studies

INTRODUCTION

According to the National Academy of Sciences, air pollution causes the death of many thousands of Americans each year. Medical experts now estimate that 70% to 90% of human cancer is caused by environmental factors, and the cancer rate has been rising each year. [1]

The problems of air pollution are complicated by our advanced technological society and the numerous classification of pollutants that result. This was recognized by EPA during its 1970 formulation with the resulting emphasis via training grants on air research during the late 1960's. But training grants have declined in recent years, not only in the field of air quality but in all environmental pollution control and abatement media areas. The following compilation of entries does not indicate, therefore, an increase in programs which are defined strictly as "air programs." Those environmental programs which include courses in air as

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[1] Jimmy Carter, "My Views on the Environment." EPA Journal, January, 1977, p. 6.

well as water, etc., will be found in the volumes of this study entitled:

* COMPOSITE: Environmental Engineering/ Technology
* COMPOSITE: Environmental Science/Health
* COMPOSITE: Environmental Studies

Criteria for program selection in this volume involved identification of at least three air pollution control related courses within the requirements.

This volume includes 34 programs from 22 states. The majority (85%) of the institutions are located in the eastern portion of the country. Two programs, however, are being conducted in one northwestern state and three programs are on-going in three southwestern states. The northeastern sector of the United States currently is represented by 19 programs which are conducted in 11 states. Seven of the southeastern states have 10 identified programs.

Table I illustrates the number and diversity of degree offerings included in this volume.

TABLE I

AIR PROGRAMS

Number and Types of Degree Offerings

Degree Level	No. of Degrees	% of Total
Certificate	1	3%
Certificate; Two-Year	1	3%
One-Year	0	0%
Two-Year	2	6%
Four-Year	3	9%
Four-Year; Graduate	9	26%
Graduate	18	53%
TOTAL	34	100%

As the table above illustrates, the majority of the programs (53%) are graduate level programs. This is also true in several of the other environmental media areas. The table above also illustrates that an additional 26% are baccalaureate and graduate level programs. Overall, 88% of the air programs are currently being conducted in four-year institutions with academic programs at the baccalaureate as well as the graduate level. With the exception

of 6% of the programs, all entries were reviewed and returned. The unreturned entries are indicated in this report by the addition of an asterisk in front of the program title.

It is important to note, however, that a great deal of training is available through non-institutional sources. The NATIONAL ENVIRONMENTAL/ ENERGY WORKFORCE ASSESSMENT, Phase II, discussed two major sources of air pollution control and abatement training.

The Air Pollution Control Association, located in Pittsburgh, Pennsylvania sponsors both continuing education and refresher courses to professionals in the field during their annual meetings. Short courses are developed to meet the varying needs of the Association's membership and are offered through the year at various locations.

The U. S. Environmental Protection Agency (EPA) has had responsibility for the management of training and technical information services in air pollution control for EPA, and state and local air pollution control agencies since the formation of EPA in 1970. These activities are carried out within the Manpower and Technical Information Branch (MTIB) of the Control Programs Development Division, Office of the Air Quality Planning and Standards at Research Triangle Park, North Carolina.

Direct training by the MTIB is carried out through the Air Pollution Training Institute (APTI). Presently, twenty different courses are offered by APTI staff and contractors. Other services available are self-instructional packaged courses, instructional resource materials and workshops.

The program entries which follow are presented in alphabetical order according to institution name. For a listing of programs by state, the reader is referred to the Appendix.

PROGRAMS, ALPHABETIZED BY INSTITUTION

ALVERNO COLLEGE

3401 S. 39th Street
Milwaukee, Wisconsin 53215

Catalog Year
1977-78

contact person:
Dr. L. C. Truchan, Chairperson
Environmental Science
(414) 671-5400

program title: **Environmental Science**
department: **Environmental Division**
degree: **4 year**

comments: **A State air monitoring station under the auspices of the State Natural Resource Department, is located on the Alverno campus. Students may receive training for certification.**

BALL STATE UNIVERSITY

Room 110
West Quadrangle
Muncie, Indiana 47306

Catalog Year
1976-77

contact person:
Dr. Clyde W. Hibbs, Chairperson
Department of Natural Resources
(317) 285-7161

program title: **Natural Resources Major**
emphasis: **Environmental Protection**
(1 of 9 options)
department: **Natural Resources**
degree: **4 year**

* (in front of program title denotes program entries which were not returned by the reviewing institution)

CITY UNIVERSITY OF NEW YORK
CITY COLLEGE SCHOOL OF ENGINEERING

Convent Ave. at 138th St.
New York, New York 10031

Catalog Year
1975-76

contact person:
Dr. Richard Marsten
Dean of Engineering
(212) 621-2541

*program title: **Air Pollution Control**
department: **Interdepartmental, Department of Civil Engineering administers the program.**
degree: **Graduate**
comments: **Meteorology and Air Pollution; Control of Atmospheric Emissions; Air Pollution Surveys; Sanitary Analysis; Air Pollution Control Programs and Administration.**

CLEMSON UNIVERSITY

Clemson, South Carolina 29631

Catalog Year
1977-78

contact person:
Dr. Thomas M. Keinath, Professor
Head of Environmental Systems Engineering
(803) 656-3276

program title: **Air Pollution**
department: **Environmental Systems Engineering**
degree: **Graduate**

COLORADO STATE UNIVERSITY

Fort Collins, Colorado 80523 Catalog Year
1977-78

contact person:
Dr. T. H. Vonder Haar
Professor and Department Head
Atmospheric Science
(303) 491-8566

program title: **Atmospheric Chemistry**
department: **Interdisciplinary**
degree: **Graduate**
comments: **An Interdisciplinary M.S. and Ph.D. program in atmospheric chemistry and atmospheric science.**

DUKE UNIVERSITY

Durham, North Carolina 27706 Catalog Year
1978

contact person:
Dr. Kenneth Richard Knoerr
Professor
(919) 684-2421

program title: **Meteorology**
department: **Forestry and Environmental Studies**
degree: **Graduate**

GEORGE WASHINGTON UNIVERSITY--NASA

Mail Stop 169
NASA - Langley Research Center
Hampton, Virginia 23665

Catalog Year
1977-78

contact person:
Dr. John E. Duberg, Director
Joint Institute for Advancement of
Flight Sciences
(804) 827-2664

program title: Environmental Modeling
emphasis: Mathematical modeling
department: Joint Institute for Advancement of
Flight Sciences
degree: Graduate

ILLINOIS INSTITUTE OF TECHNOLOGY

102 Alumni Memorial Hall
Chicago, Illinois 60616

Catalog Year
1977-78

contact person:
Dr. James W. Patterson, Chairperson
Pritzker Department of Environmental
Engineering
(312) 567-3556

program title: Environmental Engineering
department: Pritzker Department of Environmental
Engineering
degree: Graduate

MUSKINGUM AREA TECHNICAL COLLEGE

1555 Newark Road
Zanesville, Ohio 43701

Catalog Year
1976-77

contact person:
Mr. Charles M. Woolf
Division Chairperson
(614) 454-2501

program title: Environmental Quality Control Technology
emphasis: Air or Water
department: Division of Engineering & Science
degree: 2 year

NORTH CAROLINA STATE UNIVERSITY

Department of Chemical Engineering
Raleigh, North Carolina 27607

Catalog Year
1976-78

contact person:
Dr. David Marsland, Chairperson
Air Conservation Faculty
(919) 737-2325

program title: Air Conservation
department: Interdepartmental
degree: Graduate
comments: A graduate program minor.

OHIO STATE UNIVERSITY

140 West 19th Street
Columbus, Ohio 43210

Catalog Year
1976-77

contact person:
Dr. Thomas L. Sweeney
Department of Chemical Engineering
(614) 422-2727

program title: **Chemical Engineering**
department: **Chemical Engineering**
degree: **4 year**
Graduate

OREGON GRADUATE CENTER

19600 N.W. Walker Road
Beaverton, Oregon 97005

Catalog Year
1978

contact person:
Dr. James J. Huntzicker
Associate Professor and Chairperson
(503) 645-1121 ext. 274

program title: **Environmental Technology**
emphasis: **Atmospheric chemistry, air pollution, aquatic chemistry, water pollution**
department: **Department of Environmental Technology**
degree: **Graduate**

PENNSYLVANIA STATE UNIVERSITY

University Park, Pennsylvania 16802 Catalog Year **1977-78**

contact person:
Dr. Ernest R. Weidhaas
Assistant Dean for Commonwealth Campus
(814) 865-4700

*program title: **Air Pollution Control Engineering Technology**
department: **Air Pollution Control Engineering Technology**
degree: **2 year**

PORTLAND STATE UNIVERSITY

P.O. Box 751
Portland, Oregon 97207 Catalog Year **1977-78**

contact person:
Dr. Frank P. Terraglio, Acting Head
Applied Science Section
(503) 229-4631

program title: **Environmental Engineering**
emphasis: **Air pollution**
department: **Engineering and Applied Science**
degree: **Graduate**

STATE UNIVERSITY OF NEW YORK AT ALBANY

1400 Washington Avenue
Albany, New York 12222

Catalog Year
1974-76

contact person:
Dr. Harry L. Hamilton
Chairperson
(518) 457-3987

program title: **Atmospheric Science**
emphasis: **Air pollution**
department: **Atmospheric Science**
degree: **Graduate**

STEVENS INSTITUTE OF TECHNOLOGY

Castle Point Station
Hoboken, New Jersey 07030

Catalog Year
1977-78

contact person:
Dr. Fernando Sisto, Jr.
Head of the Department
(201) 792-2700

program title: **Air Pollution Control Engineering (Mini-Graduate)**
emphasis: **Educates working professionals at the post-graduate level.**
department: **Mechanical Engineering**
degree: **Certificate of Special Studies awarded**

SYRACUSE UNIVERSITY

Syracuse, New York 13210

Catalog Year
1977-78

contact person:
Dr. James A. Luker, Dean
College of Engineering
(315) 423-4341

program title: Chemical engineering
emphasis: Environmental monitoring instrumentation, aerosol technology; air pollution control, waste treatment.
department: Chemical Engineering and Materials Science
degree: 4 Year
Graduate

UNIVERSITY OF CALIFORNIA AT BERKELEY

Berkeley, California 94720

Catalog Year
1977-78

contact person:
Dr. Carl L. Monismith
Chairperson
(415) 642-6000

program title: Air Pollution Engineering
department: Civil Engineering
degree: 4 Year
Graduate
comments: Interdisciplinary program

UNIVERSITY OF CINCINNATI

Room 107, Kettering Laboratory
Cincinnati, Ohio 45267

Catalog Year
1976-77

contact person:
Dr. Bernard E. Saltzman
Environmental Hygiene Program
(513) 475-8000

program title: **Air Pollution, Industrial Hygiene**
department: **Environmental Health**
degree: **Graduate**

UNIVERSITY OF THE DISTRICT OF COLUMBIA

4200 Connecticut Avenue, N.W.
Washington, D.C. 20008

Catalog Year
1977-78

contact person:
Dr. Annye C. Buck, Dean
College of Life Sciences
(202) 282-7380

program title: **Air Pollution Technology**
department: **Environmental Science**
degree: **Certificate**
2 Year

UNIVERSITY OF FLORIDA

Gainesville, Florida 32611

Catalog Year
1977-78

contact person:
Dr. E. E. Pyatt, Chairperson
Department of Environmental
Engineering Sciences
(904) 392-0841

program title: Air Resources
department: Environmental Engineering Sciences
degree: Graduate

UNIVERSITY OF HOUSTON

4800 Calhoum
Houston, Texas 77004

Catalog Year
1977-78

contact person:
Dr. D. Luss
Chairperson
(713) 749-4407

program title: Chemical Engineering
department: Chemical Engineering
degree: 4 Year
Graduate

comments: Graduates are qualified for the technological solution of environmental, ecological and biomedical problems. The air pollution courses are offered at the graduate level.

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Urbana, Illinois 61801

Catalog Year
1977-78

contact person:
Dr. Jon C. Leibman
Head of Department
(217) 333-6966

program title: **Environmental Engineering in Civil Engineering**
department: **Civil Engineering**
degree: **4 Year**
Graduate

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Urbana, Illinois 61801

Catalog Year
1977-78

contact person:
Dr. B. T. Chao
Head of Department
(217) 333-1176

program title: **Mechanical Engineering**
department: **Mechanical and Industrial Engineering**
degree: **4 year**
Graduate

UNIVERSITY OF KENTUCKY

Lexington, Kentucky 40506

Catalog Year
1976-77

contact person:
Dr. R. B. Grieves, Chairperson
Department of Chemical Engineering
(606) 257-1748

program title: **Environmental Engineering**
department: **Chemical Engineering**
degree: **4 year**
Graduate

UNIVERSITY OF MICHIGAN

School of Public Health
Ann Arbor, Michigan 48104

Catalog Year
1977-78

contact person:
Dr. Dohrman H. Byers
Department of Environmental &
Industrial Health
(313) 764-2594

program title: **Industrial Hygiene & Air Pollution**
department: **Environmental & Industrial Health**
degree: **Graduate**

UNIVERSITY OF NORTH CAROLINA
AT CHAPEL HILL

Chapel Hill, North Carolina 27514 Catalog Year
1977

contact person:
Dr. Russell F. Christman, Professor
Department Chairperson
(919) 966-1171

program title: **Air and Industrial Hygiene**
department: **Environmental Sciences and Engineering**
School of Public Health
degree: **Graduate**

UNIVERSITY OF PITTSBURGH

Graduate School of Public Health Catalog Year
University of Pittsburgh **1977-79**
Pittsburgh, Pennsylvania 15620

contact person:
Dr. Edward McGovern, Professor
Industrial Hygiene
(412) 624-3043

program title: **Industrial Hygiene and Air Engineering**
emphasis: **Air Resources**
department: **Industrial Environmental Health Sciences**
degree: **Graduate**
comments: **Industrial Hygiene Engineering, Analytical Methods and Aerosol Physics.**

UNIVERSITY OF TENNESSEE

Knoxville, Tennessee 37916

Catalog Year
1976-77

contact person:
Dr. W. L. Grecco, Head
Civil Engineering Department
(615) 974-2503

program title: **Environmental Engineering**
emphasis: **Air Quality and Pollution Control**
department: **Civil Engineering**
degree: **4 year**
Graduate

UNIVERSITY OF WISCONSIN AT MILWAUKEE

Energetics Department, Room 819
Engineering & Mathematical Sciences Bldg.
Milwaukee, Wisconsin 53201

Catalog Year
1975-77

contact person:
Dr. K. C. Tsao,
Professor
(414) 963-4756

program title: **Atmospheric & Marine Environmental Studies**
emphasis: **Air pollution control engineering**
atmospheric & marine phenomena
air pollution meteorology
department: **Energetics Department**
degree: **Graduate**

VANDERBILT UNIVERSITY

Nashville, Tennessee 37240

Catalog Year
1977-78

contact person:
Dr. Karl B. Schnelle, Jr., Chairperson
Department of Environmental Engineering and Policy Management
(615) 322-4757

program title: **Environmental and Water Resources Engineering/Environmental Science (Air Resources)**
department: **Environmental Engineering and Policy Management**
degree: **4 year**
Graduate

WASHINGTON UNIVERSITY

Box 1185, Lindell & Skinker Blvds.
St. Louis, Missouri 63130

Catalog Year
1977-78

contact person:
Dr. Salvatore P. Sutera, Chairperson
Department of Mechanical Engineering
(314) 889-6047

program title: **Air (emphasis)**
department: **Mechanical Engineering**
degree: **Graduate**

WORCESTER POLYTECHNIC INSTITUTE

Worcester, Massachusetts 01609

Catalog Year
1976-77

contact person:
Dr. I. Zweibel
Head of Department
(617) 753-1411

program title: **Chemical Engineering**
emphasis: **Air pollution**
department: **Chemical Engineering**
degree: **4 year**

YALE UNIVERSITY

Department of Forestry &
Environmental Studies
New Haven, Connecticut 06520

Catalog Year
1976-78

contact person:
Dr. William E. Reifsnyder
Professor
(203) 436-0020

program title: **Atmospheric Science and Biometeorology**
emphasis: **Interdisciplinary, air pollution, urban environmental health**
department: **Forestry and Environmental Studies**
degree: **Graduate**

APPENDIX — Programs, Listed by State

STATE	INSTITUTION	PAGE
CALIFORNIA	University of California at Berkeley	19
COLORADO	Colorado State University	13
CONNECTICUT	Yale University	27
DISTRICT OF COLUMBIA	University of District of Columbia	20
FLORIDA	University of Florida	21
ILLINOIS	Illinois Institute of Technology	14
	University of Illinois at Urbana-Champaign	22
	University of Illinois at Urbana-Champaign	22
INDIANA	Ball State University	11
KENTUCKY	University of Kentucky	23
MASSACHUSETTS	Worcester Polytechnic Institute	27
MICHIGAN	University of Michigan	23
MISSOURI	Washington University	26
NEW JERSEY	Stevens Institute of Technology	18
NEW YORK	City University of New York City College School of Engineering	12
	State University of New York at Albany	18
	Syracuse University	19

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NORTH CAROLINA	Duke University	13
	North Carolina State University	15
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OHIO	Muskingum Area Technical College	15
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	University of Cincinnati	20
OREGON	Oregon Graduate Center	16
	Portland State University	17
PENNSYLVANIA	Pennsylvania State University	17
	University of Pittsburgh	24
SOUTH CAROLINA	Clemson University	12
TENNESSEE	University of Tennessee	25
	Vanderbilt University	26
TEXAS	University of Houston	21
VIRGINIA	George Washington University-NASA	14
WISCONSIN	Alverno College	11
	University of Wisconsin at Milwaukee	25